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FETID ABSCESSES.

Remarks on the Fetid Abscesses which frequently form in the Neighborhood of Mucous Membranes.

Many of the laws, which were supposed formerly to regulate and to be peculiar to the actions of living bodies, have been of late years disputed; and physiology has called in the aid of physical science to explain a number of pathological phenomena. The course of the fluid in the different tissues has been found, in many respects, to obey the ordinary rules of chemical and mechanical agency, as is illustrated by the transmission both of liquids and of gases, through the medium of imbibition, from one structure to another, without the intervention of the circulatory or absorbent systems. The formation of many abscesses is intimately connected, according to M. Velpeau, with such a process. His attention was first excited, by observing that many collections of matter, situated in the cellular or muscular structures, and apparently the result of active phlegmonous inflammation, are filled with an offensive and fetid pus, although there is no communication between them and any carious bones, or internal viscera. Such abscesses are observed around the mouth, at the sides or in front of the larynx or trachea, at the margin of the anus, and still more often in the abdominal parietes; in short, along the track of all organs which are covered with a mucous coat, and whose walls are more or less soft and more or less extensible. Every surgeon must have remarked the stench of many collections of matter formed in the gums, or round the mouth and anus. A few examples, however, will confirm the truth of this statement.

Case 1. A man had a large diffused swelling on the side of the face; it pointed between the cheek and arch of the upper jaw, and had existed only for six days. On opening it with a lancet, about half a wine-glassful of blackish-yellow pus, excessively putrid, escaped. One of the teeth was slightly carious; the abscess was quite healed in the course of five days.

Case 2. A woman, aged 50, had an immense abscess, which occupied all the side of the left cheek and jaw; it broke, and so abominable was the stench of the matter, that few could approach her. The matter

continued to flow, and shreds of dead cellular substance were extracted; and in a month she was well.

In this case there was no caries of the teeth, nor any disease of the maxillæ; and although there was no communication with the cavity of the mouth, the fetid smell was perceived immediately after it burst, and became less and less offensive when the abscess was thereby exposed to the external air.

Case 3. A man, aged 30, had a fluctuating swelling in front, and extending a little to the left side of the larynx. On opening it, the surgeon's attention was struck by the extreme fetor of the contents, and he inferred that the os hyoides or laryngeal cartilages were diseased; or else that some communication existed between the abscess and the gastro-pulmonary passages. A careful examination, however, proved quite convincingly that it was a simple, uncomplicated collection of matter, reaching from the parotid gland to the middle of the neck, and was neither connected with any caries or ulceration of the hard parts, nor had any opening into the larynx or œsophagus. The patient died of another disease, and the accuracy of the above account was confirmed by dissection.

Case 4. A man, aged 35 years, had suffered much from pain, &c. around the anus for ten days before he applied for advice. An abscess existed close to the sphincter: it was freely opened, and much blackish, stinking pus, mixed with lumps of putrefied substance, and smelling strongly of fæces, was evacuated. The probe did not enter the gut, and the surgeon concluded that the abscess, in spite of its fetid contents, was simply phlegmonous, and might heal without any operation. The patient was discharged, cured, in 15 days.

Case 5. A woman, aged 57, thin, but healthy, was suddenly seized with severe colic in the middle of December, 1831. Two days after, a swelling appeared in the lower and right side of the abdomen; it was painful on pressure, gradually became more circumscribed, and soon attained the size of two fists. It burst in January, and discharged a large quantity of blackish grey, grumous pus, smelling very strongly of the intestinal contents; some gas also escaped, and a few pelets of dead cellular substance. A careful examination with the probe could detect no communication with the cavity of the peritoneum, or any part of the gut; and the speedy cure made it certain that the matter had been formed in the muscular parietes.

Le Dran has recorded the following case.

Case 6. A man, aged 24, was, by his own account, seized with symptoms of enteritis. A tumor appeared in the right groin, and extended to the umbilicus; it was opened by a bistoury, and discharged much fetid pus. Le Dran thought that this abscess had its seat between the omentum and the muscular parietes; but the successful result sufficiently proves that it was not connected with the abdominal cavity.

Case 7. A young woman had a phlegmonous swelling in the hypogastric region. On puncturing it, a milky fluid and an offensive pus were evacuated. The patient died, and the abscess was an enormous sac, situated between the peritoneum and the muscles.

Observations on the preceding Cases.—Abscesses in the soft, spongy textures of the gums are very common. The fœtor of the pus has usually been attributed to the co-existence of disease of the teeth, or of the maxillary bones; but this explanation is not satisfactory in all cases, for such disease often does not exist. M. Velpeau rather ascribes it to air having entered by imbibition, and the matter becoming thereby vitiated from the resulting chemical changes; for in what manner should abscesses, whose symptoms, progress, and maturation, differ in no respect from ordinary phlegmonous inflammations, be filled with a highly offensive pus, before the possible introduction of air from without or within through any opening, and which are not accompanied with any diseased bones. It is very interesting to remark that these abscesses are observed in such regions as are lying close to mucous canals, and separated from these only by very thin walls. In the neck we find them between the fascia cervicalis and the thyro-hyoid membrane, or the pharynx, the œsophagus, or the trachea; under the jaw, between the supra-hyoid aponeurosis and the inferior wall of the cavity of the mouth; in the face, imbedded deep in the flesh of the cheeks—so that the air very probably permeates the texture of the mucous linings, and thus blends with the contents of the sac. The phenomena alluded to are still better observed when abscesses form round the margin of the anus. Many surgeons deem the stercoraceous smell, emitted from such abscesses, as unequivocally denoting the existence of genuine fistulæ in ano. M. Velpeau assures us that this idea is frequently quite erroneous, and reports a case in confirmation. A man had a very extensive abscess, situated close to the sphincter; and, when opened, every one supposed, from the stench of the discharge, that it must have communicated with the gut. The suppuration, however, speedily dried up, and the sore was cicatrized in a few days. Many analogous cases are narrated. M. Velpeau has, after a careful examination of these, come to the conclusion that a large proportion of true fistulæ ani are originally mere abscesses on the outside of the gut, and that the fistulous aperture into the bowel is a subsequent occurrence. Fortunately, purulent matter has always a tendency to the exterior of the body; else the thin walls of the gut would, in every case, be inevitably diseased.

When a fetid abscess forms in the abdominal parietes, M. Velpeau thinks that it is developed originally in, or at least takes its start from, the fascia propria, or cellular tissue which unites the peritoneum to the abdominal muscles. The purulent matter being thus deeply lodged, is supposed to receive, by transudation from the bowels, an admixture of gas or of liquids, or perhaps only of odorous effluvia. What induces M. Velpeau to believe that such a transudation does really take place, is, that he has observed that the smell of the pus varies with the situation in the abdominal parietes where the abscess is formed. Thus, in one case where an abscess existed in the right groin, a strong and distinct stercoraceous odor was emitted from the pus; whereas in another, where the abscess was situated in the epigastric region, the smell was sourish, and not unlike that of imperfectly digested food. Besides, the color of the discharge is found to vary much in different instances, and may be often observed to be somewhat indicative of the substances

which may be contained in the bowel, lying next to the posterior wall of the abscess.

The fetid abscesses of the abdominal parietes are of tedious formation, and are preceded by dull, deep-seated pain, by a tumefaction more diffuse than circumscribed, and by symptoms of general feverish irritation. When the skin becomes prominent, still the fluctuation is often very indistinct; because, in consequence of the thickness and toughness of the integuments, the matter burrows deep, separating the peritoneum from the muscular layers. Sometimes, though very rarely, the contents are discharged into the cavity of the abdomen. Le Dran reports such a case. The rarity of the occurrence is to be attributed to the tendency of suppuration towards the surface, and also to the uniform and equable pressure made by the contained viscera upon the posterior wall of the cyst. The agency of this second cause has hitherto been overlooked; but probably it is the more efficacious of the two. In all abscesses, formed in the abdominal parietes, it is necessary to make a free and large incision. M. Velpeau says that the more extensive the opening, the less danger there is from any re-action of the atmosphere, either on the walls of the cavity or on its contents; and also from the occurrence of the fever of 'absorption,' and of those symptoms of prostration which are not unfrequent in such cases. As to the dressing of the sore, it is to be conducted in the usual manner.—*Journal Univers. et Hebdom.*

CASE OF APHONIA, TREATED BY NITRAS ARGENTI.

A YOUNG woman gradually lost her voice, from repeated attacks of catarrh. Her general health was quite good. During deglutition, she experienced an uneasiness in the larynx. When she did not make any very strong effort to speak out, her voice resembled a low whisper; but if animated, and anxious to exert her speech, a noise, like a succession of shrill whistles, or of the mewings of a kitten, was produced. M. Trousseau treated the case by the local application of a strong solution of lunar caustic, introduced by means of a sponge affixed to a bougie, and gently pressed over the opening of the larynx. The operation was followed by retchings, vomiting, and a cough which nothing could allay. These distressing symptoms abated in about a quarter of an hour, and then the patient assured M. T. that she felt little pain when the caustic was applied; and she expressed her astonishment that already her voice was much stronger, and that she could speak louder than she had been able to do for eight months. She was ordered to gargle her mouth and throat with a solution of alum. The retching and vomiting recurred at intervals till the following day, and the pain of the operation continued for a day or two longer. The patient was, however, able to drink, and to swallow soup, &c. What is strange is, that although, almost immediately after the application of the caustic, the voice was so much improved, at the end of ten days the aphonia was as bad as ever. The remedy was re-applied, but in a still stronger form. A sponge, dipped in a saturated solution of the caustic, was introduced as far as the opening of the larynx, and about ten drops allowed to distil into it. Immediately

a violent convulsive cough arose, by which most of it was expelled in the Doctor's face! The pharynx, tongue, and lining membrane of the cheeks, were rendered as white as milk. Vomiting and a severe cough came on. Fortunately there was but little pain, and no fever or constitutional disturbance. Her voice did not receive speedy amendment, as after the first operation. The cough was very troublesome for twelve days; but the voice appeared to have obtained strength, although it was very hoarse. After the thirteenth day, she was able to speak for some minutes in succession, and the aphonia never afterwards returned. The voice, at first hoarse and occasionally squeaking, became more and more clear; however, after a long walk, or exposure to cold, or too much talking, the hoarseness still returns, but not the aphonia.—*Ibid.*

TWO OBSTETRIC CASES.

[Communicated for the Boston Medical and Surgical Journal.]

[The following cases from one of the subscribers to this Journal will be read with interest.—Ed.]

Case of Retained Placenta.

In the summer of 1830, Mrs. ——, a lady of slender constitution, was taken with pain and slight hemorrhage from the uterus. She considered herself in the third month of utero-gestation, and symptoms favored that conclusion. Means therefore to prevent abortion were immediately used, and eventually succeeded in checking the pain and hemorrhage. In about two months, after considerable exertion and anxiety, she was seized with severe pain about the bowels, back and loins, which was soon followed by hemorrhage of an alarming aspect, and which unfortunately continued without much abatement until the ovum was discharged, which had the appearance of being four or five months old. From this time the hemorrhage gradually ceased, though no placenta had been thrown off. Pain of some severity continued for forty-eight hours after, when it declined. The lady urged to be allowed some exercise, which was forbidden, and the recumbent posture strictly enjoined. But as no placenta had appeared, she became somewhat alarmed, and urged that something should be done for her safety. By examination, the placenta could be felt near the mouth of the uterus, which was rigidly contracted and would allow with difficulty the passage of the finger. It was therefore thought unadvisable to use any manual force, and the secale cornutum was resorted to. Pains, severe and continued, followed very soon, but were insufficient to expel the placenta. The effects of the ergot lasted for some hours. Another dose was administered the next day, which had much the same effect as before. Examination was again made, and the placenta was found adherent.

The lady having no pain or hemorrhage, and feeling pretty comfortable, it was thought best to trust the event to nature. She began again to assume gentle exercise, and soon was able to attend to her domestic concerns as usual. Nothing has yet been seen of the placenta. The lady declares that it never was discharged, that nothing of a fetid character was ever observed, and that no inconvenience followed. Her

menses did not return until about five months after, when they became regular as formerly. The lady referred to has more than common intelligence, and is a woman of strict observation and veracity; and I have not the least doubt of the truth of her statements.

I will relate another case, Mr. Editor.

Mrs. ——— was seized in the fall of 1831 with severe pain in her great toe. The pain, which she said was almost intolerable, continuing to grow more and more severe, I was sent for. The singular character of the pain was immediately noticed. It would last about four or five minutes, when a complete abatement would follow. No swelling, heat, or excitement, was perceptible. I inquired of the lady, who I observed was pregnant, if she did not consider herself in labor. She said—'No; my time will not arrive these four weeks, and I never fell short of my calculations.' I told her I was apprehensive that labor had already made some advancement. She however could not believe me, as she had no symptoms common to her at such periods, and declared that I was deceived. She begged that I would make some application to the toe, or give her something to quell her pains.

I determined to ascertain, if possible, whether any change had taken place, or was taking place, in the uterus, and insisted upon an examination, which after a while was granted. I found the first stage of labor finished, and the head pressing pretty firmly upon the perineum. She did not believe me when I urged upon her the necessity of calling help and preparing herself and the bed for the occasion. Pain in the toe became more and more severe, and lasting; and before the bed could be suitably prepared, or attendants called, she was delivered of a healthy boy, and even continued to doubt until the cries of her child convinced her. The pains of her toe immediately intermitted for nearly an hour, when they again ensued, and soon the placenta was discharged and the uterus well contracted. Pain continued however for thirty-four hours, but so mild as to require no medication.

I shall leave the reader to draw such conclusions of the above cases as he chooses. I thought their singularity a sufficient reason for transmitting them to you, even were nothing useful furnished by publication.

D. H. Hubbard, M.D.

Wintonbury, Conn., December, 1832.

READY METHOD OF ARRESTING HEMORRHAGE.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—I perceive in one of the late numbers of your excellent Journal a case of profuse and obstinate hemorrhage from the extraction of a tooth, arrested with great difficulty by a *dossil of cobweb, sulphate of copper,* and the internal use of *digitalis.*

Allow me to suggest another and still more simple remedy, which I have ever found to arrest such hemorrhage, when the above-mentioned and other local astringents usually employed have proved inefficient. I refer to the application of a *dossil of wool* taken from a *black beaver hat,*

which simple astringent operates like a charm in such cases. Upon one occasion I was called out of bed to a man supposed to be dying from loss of blood, having lost several quarts from the extraction of a tooth the preceding day; alum, sulphate of copper, and other applications, having been employed without success. I immediately filled the cavity with a dossil of wool taken from my hat, carefully pressing it in contact with the bleeding vessels by means of a probe, and the hemorrhage was immediately arrested.

Upon another occasion, on board the steamboat North America, a passenger who had had a tooth extracted the preceding day, and from which he had sustained a great loss of blood, began to sink from the hemorrhage which still continued, insomuch that the passengers became generally alarmed for his safety, and requested me to see the person, then lying down from the exhaustion induced. I had recourse to the dossil of wool as above recommended; and, to the surprise of all who witnessed this simple application, the hemorrhage instantly ceased. Having pursued this mode of treatment many years, and in every case with the same good effect, I can with confidence recommend it to your notice.

This application doubtless operates upon the principle of its astringency; but why it should possess more efficacy than the apparently stronger styptics, is to me a matter of surprise—but the facts related are perhaps worthy of record. Yours, D. H.

New York, December 20th, 1832.

CASE OF ISOLATED CHOLERA, SUCCESSFULLY TREATED.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—Should the publication of the subsequent isolated case of malignant cholera, in your opinion, throw any light upon the nature or contagiousness of this prevailing epidemic, or in any other way subserve the interest of the profession, it is at your service for that purpose. It occurred in my practice in this place, in a highly respectable family, who live in a very cleanly and salubrious situation. There was nothing about the premises that could be suspected of generating the disease, and none of the family had been near any person or thing infected with it.

The subject of this case was a boy about three years of age, the son of Mr. S. Swift. He was taken unwell September 24th, 1832, in the afternoon, with a slight diarrhœa, languor and weakness, which was thought to be brought on by eating intemperately of unripe fruit. He took nothing for it, and ate in the evening very immoderately of apple-pie. On the 25th, in the forenoon, he had four or five copious discharges from the bowels, which consisted principally of the undigested contents of the stomach, and vomited two or three times some of the same. The languor and prostration of strength rapidly increased, until 11 o'clock, A. M. when all the symptoms of spasmodic cholera were suddenly and completely developed.

In about twenty minutes after this, I saw my little patient for the first time. The following were some of the most prominent symptoms:—a ghastly, cadaverous countenance; convulsive spasms of the legs, arms, and muscles of the body, which presented a livid, sunken, and some-

what shriveled appearance; frequent, small, watery discharges, resembling rice water, from the stomach and bowels; small, rapid and almost imperceptible pulse; and great tendency of the body and breath to coldness. I gave him ʒj. sulph. eth., and followed it with a pill composed of one grain of opium and two of the submuriate of mercury; applied hot sinapisms to the bowels and feet, and bottles of hot water with blankets to every part of the body. In ten minutes, finding no relief of the symptoms, I administered the same quantity of ether, and followed it by eight grains of gum camphor, and a starch enema with ʒi. tinct. opii in it. At the expiration of 15 minutes, there being no abatement of the symptoms, I gave ʒi. tinct. opii, and employed violent friction to the extremities. In fifteen minutes more, finding no relief, I repeated the same quantity of laudanum, and the same quantity of sulphuric ether, and in a short time the discharges and spasms began to abate. I then gave ʒi. tinct. camph. comp.; and in one hour and a half from the time I first saw my patient, there was evident relief of all the symptoms. The countenance assumed a better aspect, the pulse became fuller, slower, and better, warmth returned to the extremities, and their lividity gradually disappeared.

At 3 o'clock, P. M. found him in a copious perspiration, with a pulse indicating a considerable degree of reaction. I abstracted ʒvi. of blood; removed some of the blankets; gave him about 10 grs. submuri. hyd.; and ordered, in one hour, a small quantity of flour gruel. At 6 o'clock, P. M. found my patient in a quiet state, with slight spasms at intervals, although he appeared like a person under the influence of a powerful narcotic. Ordered some hot brandy toddy and more gruel; to be repeated, if the first did not revive him. At 9 o'clock, P. M. the narcotic effect of the opium had subsided in a considerable degree, and he appeared quite happy. He remained in this state about two hours, and then cried incessantly for cold water. A little would not satisfy him, and I found it necessary to quiet him with an opiate. At 3 o'clock, A. M. on the 26th, the calomel given the day previous produced a number of bilious discharges. At 6, A. M. he was quiet, took some gruel, and said he was better. At 11, A. M. he had a number of watery discharges with a flaky substance in them. Gave him 40 gtts. of laudanum by mouth, and 60 gtts. in a starch injection. This treatment checked them for a few hours, when they returned and were suppressed again by the same treatment.

On the 27th, I found the boy comfortable; he had had a number of bilious dejections during the night, and passed some urine for the first time. From this time he rapidly convalesced; and at the expiration of one week, he had completely regained his health.

This is the only case of epidemic cholera that has occurred in this region; but there has been some tendency to it, and an unusual tendency to diarrhœa. The discharges in the bowel complaints of this season have been more watery than at any former period since I have been in the practice of medicine; and I have had a number of cases that I believe would have terminated in malignant cholera, had not timely and appropriate treatment arrested their progress.

Respectfully yours,

North Falmouth, Mass. Dec. 1832. L. W. Sherman.

INFLUENCE OF OCCUPATION ON HEALTH.—NO. VI.

[Communicated for the Boston Medical and Surgical Journal.]

Glassworkers constitute another class whose employments subject them to great vicissitudes of temperature. In introducing the pots into the mouth of the furnace, and afterward in replenishing them with new portions of the metal, which last operation must be twice repeated, the workman is exposed to an intense heat. The precise temperature in which the person is placed under these circumstances, it is not easy to determine; but it cannot be less than 180 degrees. This is sustained indeed for a very short period, perhaps a single minute or rather more; but it is such a degree of heat as could not be endured, by one unaccustomed to it, for an instant. A temperature less intense, but of a longer duration, is experienced by those who in crown glass works receive the glass from the blower, and form the plate by giving to it a rapid rotatory motion. During this process the glass remains constantly in the flame of the furnace; and the temperature, where the workman stands, is from 100 to 150, according to the season, which of course materially affects the heat at a distance of six feet from its source. From these extremes the transitions to the external air are as sudden, and made with as little precaution, as by those engaged in the last-mentioned process. Still they do not appear to induce disease, or to occasion any material inconvenience. Glassmakers are compelled in blowing to exert a violent action of the respiratory muscles; yet they do not apparently suffer from this cause. On the whole, however, it is a laborious occupation, and is seldom continued to advanced age. A man who has pursued it to the age of 40 or 45, generally finds it convenient to exchange to some different department of labor.

Class VIII.—*Occupations remarkable for the presence or absence of humidity.* As the presence or absence of moisture operates on the system in a great measure through the medium of the atmosphere, it may be proper to premise to this class a few simple facts in regard to the combination of those familiar fluids, air and water. In the language of the chemist, air is at all temperatures a solvent of water; that is, there is no degree of heat or cold known, at which a body of air, if not already saturated, will not cause to evaporate and to unite with itself a certain quantity of water exposed to its action. The water thus taken up and dissolved is rendered invisible, and does not produce the appearance of mist; for this latter phenomenon can only take place when there exists a portion of fluid in the atmosphere, merely suspended or diffused without solution through its substance. The quantity of water which the atmosphere is capable of dissolving, varies with its temperature. The warmer the air, the greater is its solvent power, and the greater amount of moisture will it be found to contain. A cold air is therefore dry in this sense, and a hot air moist, although no immediate evidence of this difference is given to the senses.

It is, then, the natural quality of the air to contain moisture; and therefore this agent is not necessarily the cause of disease. Whether by being saturated with this principle, or by containing it in a state of

mere diffusion, or on the other hand by being artificially deprived of it, the air is rendered capable of producing disease, are interesting questions, on which the consideration of the present class of occupations will tend to throw some light.

BRICKMAKERS, who by their muscular exercise and labor in the open air are allied to the first class, belong to this in virtue of their constant exposure to the contact of water. With their feet continually immersed in wet clay, and breathing an atmosphere saturated with its evaporation, they have full opportunity of testing the influence of this agent on the system. They are not, however, found to suffer more from their occupation than men whose work is under cover and dry. They are not peculiarly subject to catarrh, pleurisy, lung fever, or rheumatism, and appear at least as long-lived as the average of those who work at different trades.

PAPERMAKERS work in very wet rooms. In preparing the rags, the feet and arms are much exposed to cold water. At the vats, the arms are dipped in water and then exposed to the air, while a dense steam generally fills the room during the process of forming and pressing the paper. From this there is the transition to the drying rooms; and the same individuals are at one time over the warm vapor of the vat or perspiring at the press, and at another at the cold employ of putting the paper to dry. But notwithstanding these apparent sources of evil, papermaking is found to be a healthy employment. The workmen sometimes complain of pain in the limbs, but are seldom obliged to discontinue their work, and are by no means peculiarly liable to severe rheumatism.

DYERS are subjected to the action of steam, and are obliged to have the hands and arms very frequently immersed in fluid. They are, however, generally healthy.

HATTERS are exposed to the steam of hot water in two of the processes to which the article is subjected, and to the contact of cold alcohol in a third. They stand for hours with the head immersed in the vapor arising from the vats, while the feet are standing on a cold and damp floor. Their hands and arms are also constantly wet. When very incautious in exposing themselves, while perspiring, to the external air, they sometimes suffer from the change; but in general, the branches of the employment which have been mentioned cause them no annoyance, and do not in any degree interfere with their health.

From the consideration of this class of trades, we seem to be led to the conclusion that wet and dampness are less prolific sources of evil than is generally imagined. It is undoubtedly true, that those unaccustomed to this agent, if once exposed to its operation, are very likely to experience some ill effects, and in common language to take cold; but it appears equally evident, that the power to resist it is easily acquired, and that by many its operation is borne for an unlimited period without injury. There are several other facts besides those connected with the trades above mentioned which lead to the same conclusion. Laborers employed in digging cellars or docks, or in obtaining mud for various purposes, have their feet and legs immersed in water for hours together, yet without the production of more disease than happens to those em-

ployed in dry situations; for although when illness occurs it is often attributed and sometimes with reason to that cause, yet on the whole it may be said that habit inures to this as to other external agents, and that when its action on the system is not altered by predisposition to disease, it will be sustained for the most part without injury. An instance of constant exposure to wet may be found in sailors, who are washed for hours together in salt water; scarce any portion of the clothing remaining dry, and this too in severe weather, yet without any ill effect being produced, so that the impossibility of taking cold at sea is almost proverbial. Some are accustomed, I am aware, to attribute their immunity in this respect to the presence of salt; whether this *have* any agency, or whether the greater uniformity of temperature at sea aid in producing this effect, is a distinct question. The most important fact is, that they are enabled to sustain any degree of moisture at any temperature in which water will remain fluid, for an unlimited period.

Pilots, who in addition to the hardships endured by ordinary seamen are exposed to severe cold and great vicissitudes, are generally healthy, and often attain advanced age before they are obliged to relinquish their hazardous employment. Effects much more unequivocally injurious than any arising from cold or moisture, ensue under the influence of a dry heat, produced for the purpose of warming a working apartment, the effect of which therefore is constant and unceasing. To understand the effect of this, it is necessary again to observe that when the atmosphere is warmed by natural heat, its moisture increases with the elevation of the temperature. Hence it is that the sudden reduction of temperature in the stratum of air exposed to the earth's surface at evening, produces a fall of dew. The deposit of moisture on a glass of cold water in a warm day in summer, is owing to the fact that the air in immediate contact with the glass being suddenly cooled, becomes incapable of retaining its moisture, which is therefore deposited on the surface exposed to it. The frost on the windows of a warm room is produced by moisture deposited in like manner, and then frozen by the colder air without. Many other familiar facts may be explained upon the same principle. The moisture taken up by the air when warmed by the sun's heat is obtained from various sources, but principally from the surface of the earth, which is able to furnish an abundant supply. Now when a body of cold air is enclosed in an apartment and exposed to the action of artificial heat, its temperature being raised it tends at once to unite with an additional quantity of moisture. This tendency takes effect in part, if the fuel employed be such as to give out a considerable amount of vapor before burning, as is the case with wood. If the fuel employed be coal, which yields no moisture, the increased capacity of the air for aqueous vapor can be but imperfectly supplied. Among the sources, however, from which the deficiency will be made up, are the human lungs and skin. Both these secrete from their surfaces under all circumstances a certain amount of moisture; that produced by the latter constituting the insensible perspiration, and that from the lungs being termed the pulmonary exhalation. Both these are required to lubricate and soften the surfaces from which they exude, and maintain them in a healthy state. When an unusual demand is made on these by the atmosphere, an unusual sensa-

tion is experienced over the whole surface. The skin becomes dry, tense, and burning. The lungs being drained of their natural moisture, are expanded with difficulty, and the breathing in consequence becomes oppressed and impeded. A sensation of dryness is experienced about the mouth and throat, accompanied with the same sort of fulness and stricture with which a common catarrh or cold makes its first onset. In fact the effect on the lining membrane which covers these parts is the same in both cases. These uncomfortable effects from a dry heat, and the ill consequences which follow, are more or less felt in all working rooms artificially heated to a high temperature by the common methods; and the more the heat of the apartment exceeds that of the external air, the greater will be the degree of inconvenience. The remedy for this evil is to be found in procuring a supply of aqueous vapor, which may be obtained from steam-pipes, where this mode of warming is employed; or if a stove is used, by placing upon it a vessel containing water, the evaporation of which furnishes to the atmosphere the moisture required. The effect of this simple contrivance is misunderstood by some, who suppose that it actually withdraws from the air, by some power of attraction, the noxious ingredients contained in it. It is by what it gives, and not by what it takes away, that its beneficial effects are produced. Most of the contrivances, however, adopted for this purpose, err in presenting too small a surface to the action of the atmosphere. The greater the extent of surface, the temperature remaining the same, the greater the amount of vapor produced; and there will be little danger of any excess, though the surface be fully equal to that of the stove employed. The moisture of air, however, as well as its temperature, may be accurately estimated; and an instrument constructed with this object, and called a hygrometer, furnishes every facility for the purpose. In general, however, the sensations produced by the air will, if carefully noticed, furnish a sufficient guide.

The above observations are of course applicable only to those occupations, in which the dryness of the air is an accidental circumstance produced by the high temperature which it is found necessary to maintain. The case is much worse where the dryness of the air is an essential condition to the success of the process carried on. The effect on the system of a working room thus heated for the express purpose of rendering the air as dry as possible, will be well illustrated by some extracts from a description of the dry-houses of cloth at Leeds. In these we are told the thermometer ranges from 110 to 130, while the indications of the hygrometer prove the atmosphere to be in a state of extreme dryness. The employment is one which requires much exercise, and the men are almost entirely naked. They complain of languor, drowsiness, dizziness, perspiration, thirst, and want of appetite. We rarely find an old man in a dry-house, for few can bear the employment after the age of 40. By this time the labor and heat exhaust the nervous energy, and they are no longer able to bear the fatigue. I am not prepared to say how far this description will apply to the corresponding process in our own manufactories; but at all events it serves clearly to illustrate the operation of the general principles which have already been stated.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JANUARY 2, 1833.

MEDICAL INSTRUCTION IN THE UNITED STATES.

In no country can be found so many institutions for medical instruction as in the United States. This is true as a distinct proposition, and it is probably no less so if limited by the proportion of number of inhabitants or extent of inhabited territory. We have certainly no less than twenty established schools of medicine. Of these schools, there are—

In Maine, *two*. One at Waterville, having four professorships—and one at Bowdoin College, having also four professorships: 1. Of Chemistry and Materia Medica; 2. Theory and Practice of Physic; 3. Anatomy and Surgery; 4. Midwifery.

In New Hampshire, *one*—at Dartmouth College—having three professorships: 1. Anatomy, Surgery and Obstetrics; 2. Physiology, Theory and Practice of Physic and Materia Medica; 3. Chemistry and Pharmacy. Medical Jurisprudence is divided among the Professors.

In Massachusetts, *two*. One at Harvard University, having five professorships: 1. Theory and Practice of Medicine; 2. Anatomy and Surgery; 3. Midwifery and Medical Jurisprudence; 4. Materia Medica; 5. Chemistry. The Berkshire Medical Institution, having six professorships: 1. Theory and Practice of Medicine; 2. Medical Jurisprudence; 3. Theoretical and Operative Surgery; 4. Materia Medica and Obstetrics; 5. Anatomy and Physiology; 6. Chemistry, Botany, and Natural Philosophy.

In Connecticut, *one*—at Yale College—having six professorships: 1. Chemistry and Pharmacy; 2. Anatomy and Physiology; 3. Theory and Practice of Medicine; 4. Materia Medica and Therapeutics; 5. Principles and Practice of Surgery; 6. Obstetrics.

In Rhode Island, *one*—at Brown University.

In Vermont, *two*. One at the University of Vermont, having four professorships: 1. Natural Philosophy, Chemistry and Pharmacy; 2. Anatomy, Botany and Materia Medica; 3. Physiology, Pathology and Practice of Medicine; 4. Surgery and Obstetrics. The Vermont Academy of Medicine, with five professorships: 1. Theory and Practice of Medicine and Materia Medica; 2. Surgery and Obstetrics; 3. Anatomy and Physiology; 4. Chemistry and Natural History; 5. Natural Philosophy.

In Pennsylvania, *two*. One at the University of Pennsylvania, having six professorships: 1. Anatomy; 2. Institutes and Practice of Medicine

and Clinical Medicine; 3. Surgery; 4. Materia Medica and Pharmacy; 5. Chemistry; 6. Midwifery and Diseases of Women and Children. The Jefferson College, having seven professorships: 1. Anatomy; 2. Surgery; 3. Practice of Medicine; 4. Chemistry; 5. Materia Medica; 6. Obstetrics and Pharmacy; 7. Institutes of Medicine and Medical Jurisprudence.

In Maryland, *two*. One at the University of Maryland, having seven professorships: 1. Theory and Practice of Medicine; 2. Materia Medica; 3. Obstetrics and Diseases of Women and Children; 4. Institutes of Medicine; 5. Surgery; 6. Anatomy; 7. Chemistry. The Washington Medical College, Baltimore, with six professorships: 1. Surgery; 2. Therapeutics and Materia Medica; 3. Obstetrics and Diseases of Women and Children; 4. Theory and Practice of Medicine; 5. Anatomy and Physiology; 6. Chemistry and Medical Jurisprudence.

In Virginia, *two*. One at the Columbian College, District of Columbia, with six professorships: 1. Anatomy and Physiology; 2. Theory and Practice of Medicine and Clinical Medicine; 3. Materia Medica and Medical Botany; 4. Obstetrics; 5. Chemistry; 6. Surgery. The other at the University of Virginia, having three professorships: 1. Medicine and Medical Jurisprudence; 2. Anatomy and Surgery; 3. Chemistry and Materia Medica.

In South Carolina, *one*—the Medical College of South Carolina—having seven professorships: 1. Anatomy; 2. Surgery; 3. Institutes and Practice of Physic; 4. Obstetrics and Diseases of Women and Children; 5. Chemistry and Pharmacy; 6. Materia Medica; 7. Pathological and Surgical Anatomy.

In Kentucky, *one*—at the Transylvania University—with six professorships: 1. Theory and Practice of Medicine; 2. Institutes of Medicine, Clinical Medicine, and Medical Jurisprudence; 3. Anatomy and Surgery; 4. Obstetrics and Diseases of Women and Children; 5. Materia Medica and Medical Botany; 6. Chemistry and Pharmacy.

In Ohio, *one*—The Medical College of Ohio—having eight professorships: 1. Anatomy; 2. Chemistry and Pharmacy; 3. Surgery; 4. Materia Medica and Botany; 5. Obstetrics and Diseases of Women and Children; 6. Theory and Practice of Medicine; 7. Institutes of Medicine and Medical Jurisprudence; 8. Clinical Medicine.

In Georgia, *one*—the Medical Institute of the State of Georgia.

In New York, *two*. The College of Physicians and Surgeons, New York, having seven professorships: 1. Anatomy and Physiology; 2. Principles and Practice of Surgery; 3. Theory and Practice of Physic and Clinical Medicine; 4. Obstetrics and Diseases of Women and Children; 5. Materia Medica and Medical Jurisprudence; 6. Chemistry and Botany; 7. Surgical Anatomy and Operative Surgery. The College of Physicians and Surgeons, Fairfield, having five professorships: 1. Obste-

trics and Diseases of Women and Children; 2. Chemistry and Materia Medica; 3. Theory and Practice of Physic and Medical Jurisprudence; 4. Anatomy and Physiology; 5. Surgery.

Besides the above, are a great number of incorporated Societies that afford instruction and grant licenses to practise*; and many private schools, where the healing art is taught by lectures, lessons, and a regular discipline. At these institutions may be acquired a greater or less amount of medical knowledge, at a greater or less expenditure of time and money; and, *ceteris paribus*, the former will generally be found to bear a pretty direct ratio to the latter. There exists, however, a very liberal disposition among the professors of many, if not all the medical schools, to favor the claims of young gentlemen whose pecuniary means are limited; and a note, payable at a distant day, is cheerfully received in exchange for the privileges of even the most expensive establishments, where there is sufficient proof of good character and straitened circumstances on the part of the pupil. There are few of our young men, therefore, who cannot command the best medical instruction in the country.

TRAVELING MENAGERIE.

An unusually fine collection of quadrupeds is now exhibiting in this city. Their number amounts to about thirty, and among them are two elephants, a Bactrian camel, a rhinoceros, zebra, hyena, tiger, leopard, and several other species of animals not generally found in traveling menageries. These caravans are commonly small, consisting of a bear, a lion, and a few monkeys, and are capable of being made but little instructive to children or others who visit them. The best menagerie perhaps in the world, is that at the Jardin des Plantes, at Paris. In England, there are many, private as well as public—the best, probably, being that at Exeter Change; and next to that, the collection at the Tower, which is now in a very flourishing condition, although we have seen it when it consisted only of a lion, a bear, and one or two birds.

Among the specimens contained in the present exhibition, we would particularly notice the camel, as one not only exceedingly beautiful and interesting in itself, but of a kind that is very rare. During his travels in Arabia, Niebuhr saw but three two-humped camels. These animals are seldom found, except in the great middle zone of Asia, to the north of Taurus and the Himalaya Mountains; and that menagerie is valuable that contains one of them, however few or common may be the other animals that compose it. The present opportunity ought not to be neglected, by those who reside in or visit the city, to witness for themselves and present to their children the real forms of some of the most tame and

* A very minute and accurate account of all the schools and societies may be found in the first vol. of the Transactions of the Medical Society of the State of New York.

sagacious, as well as the most ferocious, of those quadrupeds the history of which is always so full of interest and instruction to the young.

On the Cure of Amenorrhœa by Leeches applied to the Mammæ.—There are but few of the sympathies that exist between the remote parts of the body which so decidedly manifest themselves as that between the *uterus* and *mammæ*. It would, therefore, be useless to point out how many physiological and pathological facts demonstrate this in practice. The father of medicine was not ignorant of this great sympathy, and availed himself of it therapeutically; for in floodings he recommends dry cupping to be practised on the breast, with the view, no doubt, of causing a revulsion, and exciting a new action in the womb.

Reflecting on this principle, it occurred to us that if an action could be induced in the capillary vessels of the *mammæ*, the womb might in other diseases be made to sympathize with these parts. Leeches seemed to be the most likely means of producing this action; and in a case of *amenorrhœa* of two years standing, two leeches were applied to the lower part of each breast for a month, repeating them on alternate days. In three weeks the *mammæ* swelled to an enormous size, giving a sensation to the patient as if they would burst. About the end of the month menstruation came on, and the young lady is now the mother of two children. Several other cases, in which the leeches have been tried, have been followed with the same results, and no medicine has been used excepting an aperient to keep the bowels open.

Although this remedy is submitted to the profession as a very certain means of exciting uterine action in this disease, and is founded both on the principles of physiology and pathology, it is not held up as a specific in all cases of amenorrhœa, and is not intended to supersede, but to be combined with, the other auxiliaries in the treatment of that disease. Hence purgatives, local and general, vapor baths, hellebore, and the other remedies which experience has pointed out as useful, should not be neglected. Nor is the author of the present notice aware that this practice did not exist at some previous time in the history of medicine, although, if it did exist, on what grounds it was abandoned it is difficult to conceive. Leeches were used in medicine long before the Christian era; mention being made of them both by Pliny and Galen.—*Edinburgh Medical and Surgical Journal.*

Dropsy cured by Muriate of Gold.—Dr. Wendt relates in *Rust's Magazin*, B. XXV. eight cases of dropsy, of which seven were cured by the muriate of gold; the eighth case was complicated with consumption. This remedy has been employed for several years in the hospital at Breslau, and with success. Most of the cases were the sequelæ of intermittent fever.

Whole number of deaths in Boston for the week ending Dec. 28, 36. Males, 19—Females, 17.

Of scarlet fever, 4—consumption, 4—inflammation of the bowels, 1—child-bed, 3—apoplexy, 1—old age, 2—infantile, 3—hooping cough, 1—unknown, 1—chickenpox, 1—dropsy on the brain, 1—disease of the spine, 1—burn, 1—accidental, 2—intemperance, 1—inflammation in the head, 1—fits, 1—lung fever, 1—brain fever, 1—canker, 1—sudden, 1—typhous fever, 1.

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